9.27 Borough of Mount Arlington

This section presents the jurisdictional annex for the Borough of Mount Arlington.

9.27.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan's primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Name: Keith Licata Address: 520 Altenbrand Ave, Mount Arlington, NJ 07856 Phone: 973-398-2100 E-mail: klicata@mtarlingtonpd.com	Name: Paul Nelson Address: 1 Altenbrand Ave, Mount Arlington, NJ 07856 Phone: 973-398-4200 E-mail: pnelson@mtarlingtonboro.com

9.27.2 Municipal Profile

The Borough of Mount Arlington is located in north-central Morris County. It is bordered to the northeast by Jefferson Township, to the east, south and west by Roxbury Township and to the north by Sussex County. The Borough has a total area of 2.92 square miles, of which 2.17 square miles is land and 0.75 square miles is water. According to the U.S. Census, the 2010 population for the Borough of Mount Arlington was 5,050.

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in Section 9.27.8 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.27-1. Growth and Development

Property or Development Name	Type (e.g., Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2010 to present					
None identified.					
Known or Anticipated Development in the Next Five (5) Years					
Fieldstone	Res.	300 apts.	B: 61; L: 23.05, 23.07, 42.01, 42.02	---	Under Construction
Shadow Woods	Res.	70 units	B: 61; L: 42.03 B: 72; L: 1.01, 1.02 B: 72.01; L: 3 B: 82; L: 1.01-1.04 B: 82.01; L: 7 B: 83; L: 9, 15.01, 15.02 B: 83.01; L: 1	---	Under Construction

* Only location-specific hazard zones or vulnerabilities identified.

9.27.3 Natural Hazard Event History Specific to the Municipality

Morris County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2008 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.27-2. Hazard Event History

Dates of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
March 12 – April 15, 2010	Severe Storms and Flooding	DR-1897	Yes	Yes, storm blowdown cleanup. Short term road closures
December 26-27, 2010	Severe Winter Storm and Snowstorm	DR-1954	Yes	Yes, storm blowdown cleanup. Short term road closures
August 26 – September 5, 2011	Hurricane Irene	EM-3332 DR-4021	Yes Yes	Yes, extended power outage
September 28 – October 6, 2011	Remnants of Tropical Storm Lee	DR-4039	No	Yes, extended power outage
October 29, 2011	Severe Storm	DR-4048	Yes	Yes, extended power outage
October 26 – November 8, 2012	Hurricane Sandy	EM-3354 DR-4086	Yes Yes	Yes, extended power outage. Numerous trees down creating short term road blockages. Police Overtime needed for subsequent gas shortage to control gas station traffic.

9.27.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Borough of Mount Arlington. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Borough of Mount Arlington.

Table 9.27-3. Hazard Risk/Vulnerability Risk Ranking

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard [a, c]	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking [b]
Drought	Damage estimate not available	Frequent	27	Medium
Dam Failure	Damage estimate not available	Rare	6	Low
Earthquake	500-year MRP: $876,331 2,500-year MRP: $17,658,545	Occasional	24	Medium

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard [a, c]	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking [b]
Extreme Temperature	Damage estimate not available	Frequent	18	Medium
Flood	1% Annual Chance: $16,970	Occasional	12	Low
Geological Hazards	Exposed to Class A and Class B: $0	Rare	6	Low
Severe Storm	100-Year MRP: $666,211 500-year MRP: $8,630,479 Annualized: $56,192	Frequent	48	High
Winter Storm	1% GBS: $16,985,061 5% GBS: $84,925,306	Frequent	54	High
Wildfire	Estimated Value Exposed to Extreme, Very High and High: $86,455,656	Rare	9	Low
Disease Outbreak	Damage estimate not available	Frequent	36	High
Hazardous Materials	Damage estimate not available	Frequent	36	High
Infestation	Damage estimate not available	Frequent	18	Medium

Notes:

a. Building damage ratio estimates based on FEMA 386-2 (August 2001)

b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30+
Low = Total hazard risk ranking below 20

c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.

d Loss estimates for the flood and earthquake hazards represent both structure and contents.

e. The HAZUS-MH earthquake model results are reported by Census Tract.

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Borough of Mount Arlington.

Table 9.27-4. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 100-year Boundary (3)
Borough of Mount Arlington	15	2	$3,807.33	0	0	0

Source: FEMA Region 2, 2014

(1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of 9/30/2014. Please note the total number of repetitive loss properties includes the severe repetitive loss properties. The number of claims represents claims closed by 9/30/14.

(2) Total building and content losses from the claims file provided by FEMA Region 2.

(3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.
A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.
Number of policies and claims and claims total exclude properties located outside County boundary, based on provided latitude and longitude.

Critical Facilities

The Borough of Mount Arlington does not have any identified critical facilities located within the 1- or 0.2-percent annual chance flood zones.

9.27.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Borough of Mount Arlington.

Table 9.27-5. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Master Plan	Yes	Local	Land Use and Planning Board	Last revision was in 2005; currently undergoing another revision
Capital Improvements Plan	Yes	Local	Administrative	Required by the State to have this plan
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	Yes	Local	Land Use Board	Plan is consistent with the N.J.A.C. 7:8 -5.4 Runoff Quantity Standards intended to mitigate flooding impact caused by runoff
Open Space Plan	Yes	Local	Land Use Board	The Plan is in the form of the Open Space Government Use Zoning District where some of the most significant concentrations of steep slopes exist.
Stream Corridor Management Plan	Yes	Local	Land Use Board	This was identified in the 1999 version of the Master Plan and had been addressed through the development of public sanitary sewer service along the Lake Hopatcong area.
Watershed Management or Protection Plan	Yes	Local	Land Use Board	This was identified in the 1999 version of the Master Plan and had been addressed through the development of public sanitary sewer service along the Lake Hopatcong area.
Economic Development Plan	Yes	Local	Land Use Board	The Plan is specific in areas currently designated for commercial development which is well suited in location to minimize natural hazard

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No)	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
				impacts.
Comprehensive Emergency Management Plan	Yes	Local	OEM	Emergency Operations Plan
Emergency Response Plan	No			
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:	Yes	Local	Land Use Board	Re-Development Plan
Regulatory Capability				
Building Code	Yes	State & Local	Construction Dept.	State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) Chapter 67 of Borough Code
Zoning Ordinance	Yes	Local	Zoning Board	Chapter 17 (Land Development), Article 8 (Zoning)
Subdivision Ordinance	Yes	Local	Land Use Board	Chapter 17 (Land Development)
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Construction	Chapter 99 of Borough Code
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local		
Growth Management Ordinances	No			
Site Plan Review Requirements	No			
Stormwater Management Ordinance	Yes	Local	Land Use Board	Chapter 135 (Sewers) and Chapter 136 (Storm Sewer System) of the Borough Code
Municipal Separate Storm Sewer System (MS4)	Yes	Local	Borough	Chapter 136 (Storm Sewer System) of the Borough Code
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State	Division of Consumer Affairs	N.J.A.C. 13:45A-29.1
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]	No			

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Borough of Mount Arlington.

Table 9.27-6. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Land Use Board – combined board handling the business of both the Planning and Zoning Boards
Mitigation Planning Committee	Yes	OEM, Administration, Land Use
Environmental Board/Commission	Yes	Mount Arlington Green Initiatives Committee (MAGIC)
Open Space Board/Committee	Yes	Land Use Board
Economic Development Commission/Committee	No	
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	Yes	Surrounding Communities
Technical/Staffing Capability		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	J. Caldwell & Associates, LLC, CP Engineers LLC, Matrix New World Engineering Inc.
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	J. Caldwell & Associates, LLC, CP Engineers LLC, Matrix New World Engineering Inc.
Planners or engineers with an understanding of natural hazards	Yes	J. Caldwell & Associates, LLC, CP Engineers LLC, Matrix New World Engineering Inc.
NFIP Floodplain Administrator	Yes	Linda DeSantis, Borough Clerk
Surveyor(s)	Yes	J. Caldwell & Associates, LLC, CP Engineers LLC, Matrix New World Engineering Inc.
Personnel skilled or trained in GIS and/or Hazus-MH applications	No	
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	OEM, Keith Licata
Grant Writer(s)	Yes	J. Caldwell & Associates, LLC, CP Engineers LLC, Matrix New World Engineering Inc.
Staff with expertise or training in benefit/cost analysis	Yes	CP Engineers, LLC – Borough Engineering
Professionals trained in conducting damage assessments	Yes	CP Engineers, LLC – Borough Engineering

Fiscal Capability

The table below summarizes financial resources available to the Borough of Mount Arlington.

Table 9.27-7. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community Development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas, or electric service	No

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Impact Fees for homebuyers or developers of new development/homes	No
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	No
Other	N/A

Community Classifications

The table below summarizes classifications for community program available to the Borough of Mount Arlington.

Table 9.27-8. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	NP
Building Code Effectiveness Grading Schedule (BCEGS)			
Public Protection (ISO Fire Protection Classes 1 to 10)			
Storm Ready	No	NP	NP
Firewise	No	NP	NP
Disaster/Safety Programs in/for Schools	Yes	N/A	N/A
Organizations with Mitigation Focus (advocacy group, non-government)	No		
Public Education Program/Outreach (through website, social media)	Yes	N/A	Facebook
Public-Private Partnerships	No		

N/A = Not applicable. NP = Not participating. - = Unavailable. TBD = To be determined.

The classifications listed above relate to the community's ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule

- The ISO Mitigation online ISO's Public Protection website at http://www.isomitigation.com/ppc/0000/ppc0001.html
- The National Weather Service Storm Ready website at http://www.weather.gov/stormready/howto.htm
- The National Firewise Communities website at http://firewise.org/

Self-Assessment of Capability

The table below provides an approximate measure of Mount Arlington's capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.27-9. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)*	Moderate	High
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	
Community Resiliency Capability		X	
Capability to Integrate Mitigation into Municipal Processes and Activities.		X	

National Flood Insurance Program

NFIP Floodplain Administrator

Linda DeSantis, Borough Clerk

Flood Vulnerability Summary

As of September 30, 2014, there are 15 NFIP policies within the Borough with a total of two paid claims. The Borough entered the NFIP on October 26, 1979.

Resources

Chapter 99 of the municipal code is the Flood Damage Prevention ordinance for the Borough. It was adopted by the Borough on December 16, 1987. According to the FDPO, the Borough Clerk is the official of the Borough responsible for complying with the eligibility requirement set forth in this ordinance.

Compliance History

The Borough is currently in good standing with the NFIP.

Regulatory

The Borough NFIP is consistent with the minimum Federal and State NFIP requirements. The Borough is willing to attend educational discussions and trainings to further enhance their understandings and responsibilities in flooding within the Borough.

Community Rating System

The Borough of Mount Arlington does not participate in the Community Rating System (CRS) program.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Planning

The Borough of Mount Arlington currently has a master plan that is dated 2005. It is currently undergoing a revision. The current master plan does not consider impact to development in natural hazard risk areas. However, the current revision of the master plan will refer to the Morris County Hazard Mitigation Plan.

The Borough has an appointed municipal planner with the current responsibilities including review and updating the Master Plan, ordinances identified as requiring revision to meet the changing conditions and needs of the community development as well as continued protection of the constituency health, welfare and safety as it may apply. This is extended to individual applications for land development throughout the Borough as well.

The Borough's site plan review process considers natural hazard risk in the community. Impacts to and proximity to steep slopes, floodplains, and environmentally sensitive areas are part of the development code of Mt. Arlington.

The Borough has indicated that they have the following plans:

- Re-Development Plan - This plan is based on a tract specific process which does incorporate natural hazard avoidance and management.
- Growth Plan – Most of the Borough is built out so there is no active plan formalized towards the goals of growth.
- Economic Development Plan – This plan is specific in areas currently designated for commercial development which is well suited in location to minimize natural hazard impacts.
- Open Space Plan – This plan is in the form of the Open Space Government Use Zoning District where some of the most significant concentrations of steep slopes exist.
- Watershed or Stream Corridor Management Plan – This plan was identified in the 1999 version of the Master Plan and had been addressed through the development of public sanitary sewer service along the Lake Hopatcong area.
- Local Waterfront Revitalization Plan - The waterfront is mostly residential and fully built out, therefore this is not applicable.

Regulatory and Enforcement

The Borough Planning Board is tasked with the review and recommendation of approval of any proposed development provided that the plan is compliant with all Borough ordinances and standards. These are as previously stated maintained to be consistent with all Federal, State and local hazard and stormwater regulations. The Planning Board also requires all applicants to provide mapping or plans illustrating the proximity to any stipulated natural risk areas as well as proposed action/design intended to mitigate and/or manage impacts and risk associated with these potential hazards.

The development code of the Borough of Mount Arlington requires stormwater detention throughout the Borough as well as underground electric within new residential and commercial developments. Steep slopes do require additional mitigation if developed upon.

Operational and Administration

Borough employees attend quarterly public safety meetings where natural hazard risk is addressed as deemed appropriate. Additionally, the Borough DPW staff is trained annually.

The Borough's Building Code Official's job title specially includes the identification and/or implementing projects/actions or other efforts to reduce natural hazard risk in the community. The Building Code Official is also part of the New Jersey Building Officials Association.

Fiscal

The Borough has Capital Improvement Projects that can support hazard mitigation projects within the municipality. The Borough has received several grants for mitigation-related projects (see *Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy* for details on these grants).

The Borough's municipal/operating budget includes line items for mitigation projects and activities. There is a budgeted amount for operations of emergency management. Additionally, the Borough has a Capital Improvements Budget that includes a budget for mitigation-related projects. The capital improvement budget is established and annually updated to include projects specific to public infrastructure based on direct impact to safety, health and welfare of the community which include the maintenance of reliable water service, sanitary service, roadway access, and drainage.

Education and Outreach

The Borough has established an email alert system as well as a reverse 911 call alert for the purpose of informing the public on natural hazards, emergencies, and assistance. In addition to the email, the Borough website is regularly updated to provide the latest information on the same. There are also two electronic notice boards located along the main thoroughfare in the Borough providing the most pertinent information as appropriate. Post Hurricane Sandy, the Borough held emergency preparedness seminars for the public as well.

9.27.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2010 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.

Table 9.27-10. Past Mitigation Initiative Status

2010 Mitigation Action	Lead	Status (In progress, No progress, Complete)	Description of Status	Next Step (Include in 2015 HMP or Discontinue)	Description of Next Step
Mount Arlington 1: Replacement of culvert on Altenbrand Avenue.	Municipal Engineer	No Progress	0% complete, no funding secured	Include in 2015 HMP	This initiative will be included in the 2015 HMP Update.
Mount Arlington 2: Waterproof electrical system for Mount Arlington Public School (Shelter)	Municipal Engineer	No Progress	0% complete, no funding secured	Include in 2015 HMP	This initiative will be included in the 2015 HMP Update.
Mount Arlington 3: Backup power (generator) for Mount Arlington Public School (shelter).	Municipal Engineer	No Progress	0% complete, no funding secured	Include in 2015 HMP	This initiative will be included in the 2015 HMP Update.
Mount Arlington 4: Flood-proof electrical system for Edith M. Decker school (shelter).	Municipal Engineer	No Progress	0% complete, no funding secured	Include in 2015 HMP	This initiative will be included in the 2015 HMP Update.
Mount Arlington 5: Backup generator for Edith M Decker school (shelter)	OEM Coordinator	No Progress	0% complete, no funding secured	Include in 2015 HMP	This initiative will be included in the 2015 HMP Update.
Mount Arlington 6: Retrofit impact resistant windows and shutters to municipal building located on Howard Avenue (municipal shelter)	Municipal Engineer	No Progress	0% complete, no funding secured	Include in 2015 HMP	This initiative will be included in the 2015 HMP Update.
Mount Arlington 7: Backup generator for shelter located on Howard Avenue	OEM Coordinator	No Progress	0% complete, funding secured but not released	Include in 2015 HMP	Funding obtained through Alternative Energy grant and work will begin once funding is released to the Borough. This initiative will be included in the 2015 HMP Update.
Mount Arlington 8: Elevate mechanicals out of flood prone basement in municipal building located on Howard Avenue.	Municipal Engineer	No Progress	0% complete, no funding secured	Include in 2015 HMP	This initiative will be included in the 2015 HMP Update.
Mount Arlington 9: Acquire Right Of Way for private driveway to facilitate secondary emergency access/evacuation for Bertrand Island.	Municipal Engineer	No Progress	0% complete, no funding secured	Include in 2015 HMP	This initiative will be included in the 2015 HMP Update.
Mount Arlington 10: Develop all-hazards public education and outreach program for hazard mitigation and preparedness.	Local and County OEM	No Progress	Public education and outreach established through Borough social media and reverse 911	Include in 2015 HMP	The Borough will continue with public outreach and education to the community. This initiative will be included in the 2015 HMP Update.

Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy

The municipality has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2010 Plan:

- All areas in the Borough of Mount Arlington are maintained regularly that includes stormwater management facilities.
- Borough staff attend quarterly public safety meetings where natural hazard risk is addressed when appropriate. The DPW receives training annually.
- The Borough received a $250,000 grant from NJDOT for stormwater runoff and roadway rehabilitation on Succasunna Road in the municipality, with the remaining to be supplemented with Borough capital budget funding.
- Morris County funded the realignment and stormwater provisions of Howard Boulevard; 100% of roadway construction work will be reimbursed by the County with all design and sidewalk provisions to be paid for by the Borough through capital improvement budgets.
- The Borough received a grant from the New Jersey Department of Law and Public Safety in the amount of $142,800 in 2014; however, it was reassessed for a reduced $75,000 to purchase emergency generators to accommodate all municipal buildings and water tower/supply facilities.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Borough of Mount Arlington participated in a mitigation action workshop in January 2015 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

Table 9.27-11 summarizes the comprehensive-range of specific mitigation initiatives the Borough of Mount Arlington would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, fourteen evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.27-12 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.

Table 9.27-11. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
BMT-1 (old Mount Arlington 10)	Develop and implement an enhanced all-hazards, public outreach / education / mitigation information program on natural hazard risks and what they can do in the way of mitigation and preparedness, including flood insurance. This program will: • Including natural hazard risk and risk reduction information through social media (Facebook) and reverse 911											
	See above	N/A	All	1, 4	Local and County OEM	Medium	Low	Municipal Budget; HMA Programs with local or county match	Short Term	High	EAP	PI
BMT-2 (old Mount Arlington 1)	Replacement of culvert on Altenbrand Avenue.	Existing	Flood, Severe Weather, Severe Winter Weather	3, 4	Municipal Engineer	Medium	Medium to High	FMA, PDM-C, HMGP	Short Term	Medium	SIP	PP
BMT-3 (old Mount Arlington 2)	Waterproof electrical system for Mount Arlington Public School (Shelter)	Existing	Flood, Severe Weather, Severe Winter Weather	3, 4	Municipal Engineer	Medium	High	FMA, PDM-C, HMGP	Short Term	High	SIP	PP
BMT-4 (old Mount Arlington 3, 7, and 9 and LOI #1897 and #1116))	Backup power (generator) for the following critical facilities in the Borough: • Mount Arlington Public School (shelter) (Funding obtained through Alternative Energy grant and work will begin once funding is released to the Borough) • Edith M Decker school (shelter) • shelter located on Howard Avenue • Kadel water pump (portable)											
	See above	Existing	All	3, 4	Municipal Engineer and OEM Coordinator	High	High	Municipal Budget; HMA Programs with local or county match	Short Term	High	SIP	PP
BMT-5 (old Mount Arlington 4)	Flood-proof electrical system for Edith M. Decker school (shelter).	Existing	Flood, Severe Weather, Severe Winter Weather	3, 4	Municipal Engineer	Medium	High	FMA, PDM-C, HMGP	Short Term	Medium	SIP	PP
BMT-6	Retrofit impact resistant	Existing	Severe	3, 4	Municipal	Medium	High	PDM-C	Short Term	High	SIP	PP

Table 9.27-11. Proposed Hazard Mitigation Initiatives

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
(old Mount Arlington 6)	windows and shutters to municipal building located on Howard Avenue (municipal shelter)		Weather, Severe Winter Weather		Engineer			and HMGP				
BMT-7 (old Mount Arlington 8)	Elevate mechanicals out of flood prone basement in municipal building located on Howard Avenue.	Existing	Flood, Severe Weather, Severe Winter Weather	3, 4	Municipal Engineer	Medium	High	FMA, PDM-C and HMGP	Short Term	Medium	SIP	PP
BMT-8	Acquire Right Of Way for private driveway to facilitate secondary emergency access/evacuation for Bertrand Island.	Existing	All	3, 4	Municipal Engineer	High	High	NJDEP Blue Acres, NJDOT	Short Term	High	SIP	PP

Notes:

Not all acronyms and abbreviations defined below are included in the table.

**Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.*

Acronyms and Abbreviations:

CAV	*Community Assistance Visit*
CRS	*Community Rating System*
DPW	*Department of Public Works*
FEMA	*Federal Emergency Management Agency*
FPA	*Floodplain Administrator*
HMA	*Hazard Mitigation Assistance*
N/A	*Not applicable*
NFIP	*National Flood Insurance Program*
NJDEP	*New Jersey Department of Environmental Protection*
NJOEM	*New Jersey Office of Emergency Management*
OEM	*Office of Emergency Management*

Potential FEMA HMA Funding Sources:

FMA	*Flood Mitigation Assistance Grant Program*
HMGP	*Hazard Mitigation Grant Program*
PDM	*Pre-Disaster Mitigation Grant Program*
RFC	*Repetitive Flood Claims Grant Program (discontinued 2015)*
SRL	*Severe Repetitive Loss Grant Program (discontinued 2015)*

Timeline:

Short	*1 to 5 years*
Long Term	*5 years or greater*
OG	*On-going program*
DOF	*Depending on funding*

Costs:

Where actual project costs have been reasonably estimated:

Low	*< $10,000*
Medium	*$10,000 to $100,000*

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low=	*< $10,000*
Medium	*$10,000 to $100,000*

Costs:

High *> $100,000*

Where actual project costs cannot reasonably be established at this time:

Low *Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.*

Medium *Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.*

High *Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.*

Benefits:

High *> $100,000*

Where numerical project benefits cannot reasonably be established at this time:

Low *Long-term benefits of the project are difficult to quantify in the short term.*

Medium *Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.*

High *Project will have an immediate impact on the reduction of risk exposure to life and property.*

Mitigation Category:

- *Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.*
- *Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.*
- *Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.*
- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities*

CRS Category:

- *Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.*
- *Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.*
- *Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.*
- *Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities*

Table 9.27-12. Summary of Prioritization of Actions

Mitigation Action/Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
BMT-1 (old Mount Arlington 10)	Develop and implement an enhanced all-hazards, public outreach / education / mitigation information program	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	High
BMT-2 (old Mount Arlington 1)	Replacement of culvert on Altenbrand Avenue.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Medium
BMT-3 (old Mount Arlington 2)	Waterproof electrical system for Mount Arlington Public School (Shelter)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	High
BMT-4 (old Mount Arlington 3, 7, and 9 and LOI #1897 and #1116	Backup power (generator) for the following critical facilities in the Borough	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	High
BMT-5 (old Mount Arlington 4)	Flood-proof electrical system for Edith M. Decker school (shelter).	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	High
BMT-6 (old Mount Arlington 6)	Retrofit impact resistant windows and shutters to municipal building located on Howard Avenue (municipal shelter)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Medium
BMT-7 (old Mount Arlington 8)	Elevate mechanicals out of flood prone basement in municipal building located on Howard Avenue.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	High
BMT-8	Acquire Right Of Way for private driveway to facilitate secondary emergency access/evacuation for Bertrand Island.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Medium

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.

9.27.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.27.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Borough of Mount Arlington that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Borough of Mount Arlington has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.27.9 Additional Comments

None at this time.

Figure 9.27-1. Borough of Mount Arlington Hazard Area Extent and Location Map 1

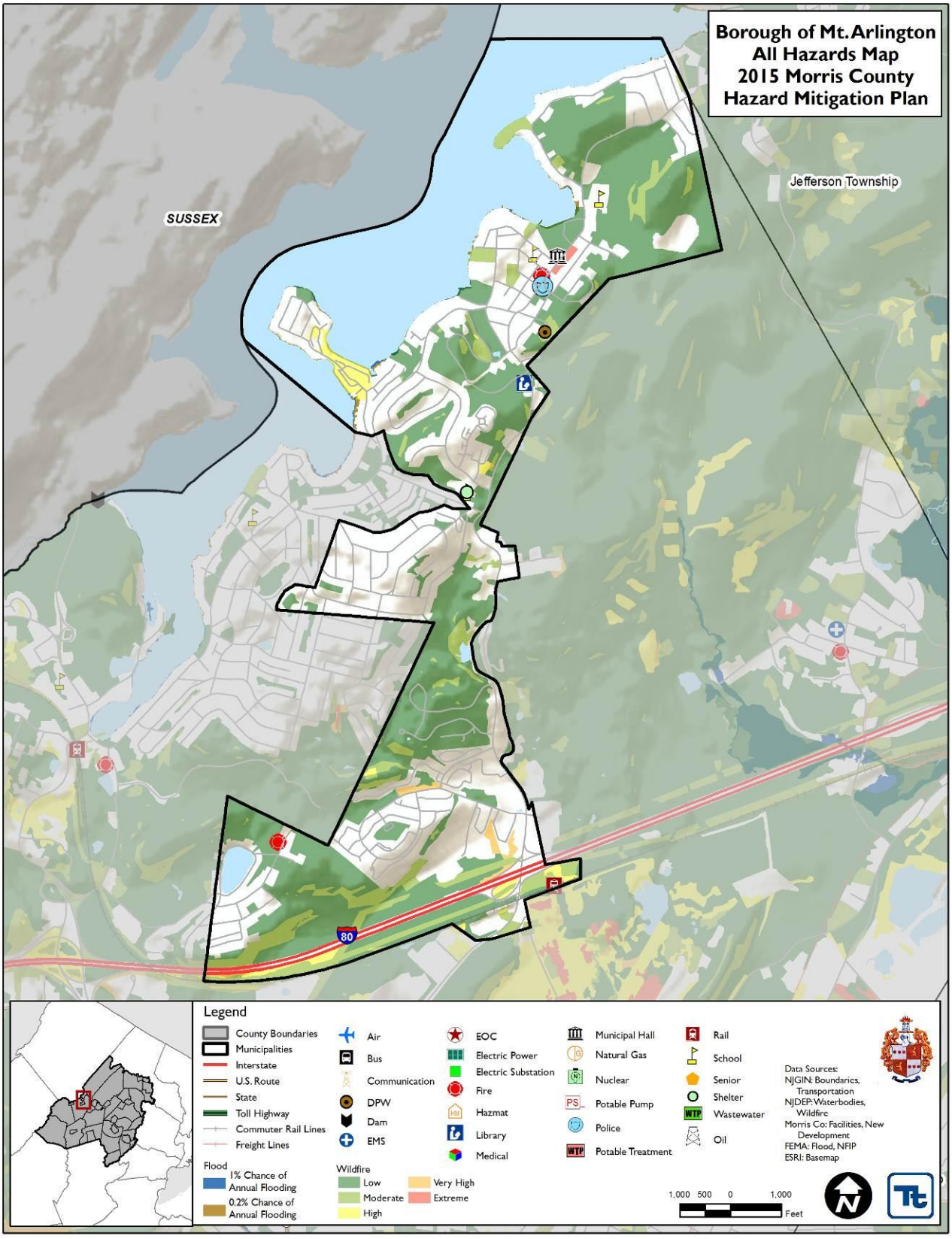
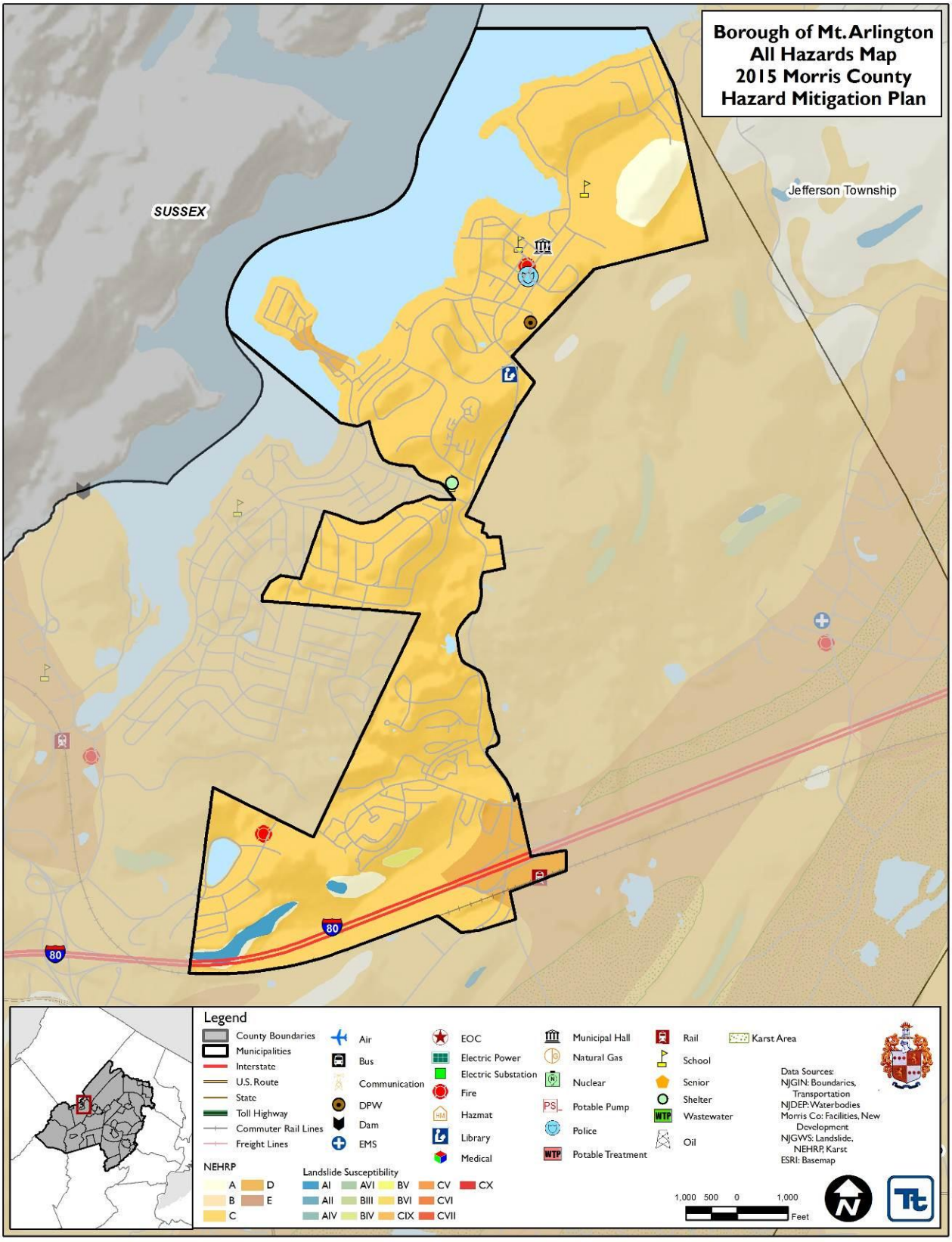


Figure 9.27-2. Borough of Mount Arlington Hazard Area Extent and Location Map 2



Action Number: BMT-2
Mitigation Action/Initiative: Replacement of culvert on Altenbrand Avenue

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Weather, Severe Winter Weather
Specific problem being mitigated:	Flooding of Altenbrand Avenue
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Replace culvert at Altenbrand Avenue
	2. Do nothing – current problem continues
	3. No other feasible actions/projects identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Replace culvert at Altenbrand Avenue
Action/Project Category	SIP
Goals/Objectives Met	3, 4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	Medium to High
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipal Engineer
Local Planning Mechanism	Capital Improvement, Stormwater Management
Potential Funding Sources	FMA, PDM-C, HMGP
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: BMT-2
Mitigation Action/Initiative: Replacement of culvert on Altenbrand Avenue

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	Medium	

Action Number: BMT-3
Mitigation Action/Initiative: Waterproof electrical system for Mount Arlington Public School

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Weather, Severe Winter Weather
Specific problem being mitigated:	Electrical system at the public school is exposed to flood waters and poses a threat to the entire system
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Waterproof the electrical system
	2. Do nothing – current problem continues
	3. No other feasible actions/projects identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Identify the best solution to waterproof electrical system of the Mount Arlington public school and upgrade the system accordingly.
Action/Project Category	SIP
Goals/Objectives Met	3, 4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Municipal Engineer
Local Planning Mechanism	Capital Improvement
Potential Funding Sources	FEMA, PDM-C and HMGP
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: BMT-3
Mitigation Action/Initiative: Waterproof electrical system for Mount Arlington Public School

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	High	

Action Number: BMT-4
Mitigation Action/Initiative: Backup power (generators) for critical facilities

Assessing the Risk	
Hazard(s) addressed:	All
Specific problem being mitigated:	Loss of power to critical facilities within the Borough
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Provide backup power to critical facilities in the Borough
	2. Do nothing – current problem continues
	3. No other feasible actions/projects identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Backup power (generator) for the following critical facilities in the Borough: • Mount Arlington Public School (shelter) (Funding obtained through Alternative Energy grant and work will begin once funding is released to the Borough) • Edith M Decker school (shelter) • shelter located on Howard Avenue • Kadel water pump (portable)
Action/Project Category	SIP
Goals/Objectives Met	3, 4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	High
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Municipal Engineer and OEM Coordinator
Local Planning Mechanism	Capital Improvement, Emergency Management
Potential Funding Sources	Municipal Budget; HMA Programs with local or county match
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: BMT-4
Mitigation Action/Initiative: Backup power (generators) for critical facilities

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	High	

Action Number: BMT-5
Mitigation Action/Initiative: Flood-proof electrical system for Edith M. Decker school (shelter)

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Weather, Severe Winter Weather
Specific problem being mitigated:	The school is used as a shelter during emergencies and the electrical system is not floodroof.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Floodproof electrical system of the Edith M Decker school
	2. Do nothing – current problem continues
	3. No other feasible actions/projects identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Identify the best solution to floodproof the electrical system of the Edith M Decker school, which is used as a shelter, and upgrade the system accordingly.
Action/Project Category	SIP
Goals/Objectives Met	3, 4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	High
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipal Engineer
Local Planning Mechanism	Capital Improvement, Emergency Management
Potential Funding Sources	FMA, PDM-C, HMGP
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: BMT-5
Mitigation Action/Initiative: Flood-proof electrical system for Edith M. Decker school (shelter)

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	Medium	

Action Number: BMT-6
Mitigation Action/Initiative: Retrofit impact resistant windows and shutters to municipal building

Assessing the Risk	
Hazard(s) addressed:	Severe Weather, Severe Winter Weather
Specific problem being mitigated:	During periods of strong winds, the windows and shutters of the municipal building are not built to withstand the winds.
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Retrofit impact resistant windows and shutters to municipal building
	2. Do nothing – current problem continues
	3. No other feasible actions/projects identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Retrofit impact resistant windows and shutters to municipal building located on Howard Avenue (municipal shelter).
Action/Project Category	SIP
Goals/Objectives Met	3, 4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	High
Priority*	High
Plan for Implementation	
Responsible Organization	Municipal Engineer
Local Planning Mechanism	Capital Improvement, Emergency Management
Potential Funding Sources	PDM-C and HMGP
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: BMT-6
Mitigation Action/Initiative: Retrofit impact resistant windows and shutters to municipal building

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	Medium	

Action Number: BMT-7
Mitigation Action/Initiative: Elevate mechanicals out of flood prone basement in municipal building

Assessing the Risk	
Hazard(s) addressed:	Flood, Severe Weather, Severe Winter Weather
Specific problem being mitigated:	The basement of the municipal floods which impacts the mechanicals of the building
Evaluation of Potential Actions/Projects	
Actions/Projects Considered (name of project and reason for not selecting):	1. Elevate mechanicals out of flood prone basement in municipal building
	2. Do nothing – current problem continues
	3. No other feasible actions/projects identified
Action/Project Intended for Implementation	
Description of Selected Action/Project	Elevate mechanicals out of flood prone basement in municipal building located on Howard Avenue.
Action/Project Category	SIP
Goals/Objectives Met	3, 4
Applies to existing, future, or not applicable	Existing
Benefits (losses avoided)	Medium
Estimated Cost	High
Priority*	Medium
Plan for Implementation	
Responsible Organization	Municipal Engineer
Local Planning Mechanism	Capital Improvement, Emergency Management
Potential Funding Sources	FMA, PDM-C and HMGP
Timeline for Completion	Short Term / DOF
Reporting on Progress	
Date of Status Report/ Report of Progress	Date: Progress on Action/Project:

*** Refer to results of Prioritization (page 2)**

Action Number: BMT-7
Mitigation Action/Initiative: Elevate mechanicals out of flood prone basement in municipal building

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)	Medium	